

5. In rhigolene we possess a most valuable local anæsthetic for intra-nasal operations, the effects produced being more rapid and complete but of shorter duration than those of cocaine.

6. Rhigolene is advantageously employed in conjunction with cocaine.

25 EAST THIRTY-FIRST STREET.

## FURTHER OBSERVATIONS ON THE USE OF COCAINE.

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SINCE my communication on cocaine and its application, MEDICAL RECORD, October 25th of this year, I have used the new anæsthetic in a considerable number of cases, of which the following may be of interest even after the galaxy of cocaine papers that have appeared in the American and foreign press since October 18th.

CASE I.—*Enucleation of an eyeball under anæsthesia from injecting cocaine into the post-ocular cellular tissue.*

—To-day, at my clinic at the University Medical College, I presented a patient, aged twenty-five years, in whose left eye I had diagnosticated a choroidal sarcoma. I stated before the class that it would be quite an interesting experiment to inject cocaine into the orbit, behind the globe, and afterward test the sensibility of the anterior parts of the eye, supplied by the ciliary nerves. The hour, however, drawing to a close, the practical indications of the case were the only ones we had time to attend to. Instilled two drops of a four per cent. solution of Merck's hydrochlorate of cocaine into the conjunctival sac. Five minutes later another five drops were instilled, and about six minims of the same solution injected behind the globe. This was easily done and not felt at all by the patient. The eyeball had been forcibly drawn toward the nose with a pair of fixing forceps, the point of the hypodermic syringe thrust into the orbital tissue as far as the posterior pole of the globe. Five minutes later the eye was enucleated in the usual way. The patient indicated slight pain at the division of the tendons of the recti muscles. The division of the optic nerve and the dissection of the posterior segment of the globe caused almost no pain. When the eyeball was removed, I thrust the end of the forceps an inch deep into the wound of the orbital cellular tissue. The patient did not move, and said she felt nothing. The bleeding was very scant. The eyeball was opened at once, and a typical melanotic sarcoma of the choroid, the size of a cherry pit, covered by detached retina, was exhibited to the class. Ten minutes later, when the hemorrhage had completely ceased, I united the conjunctival wound with a continuous suture. By this time the sensibility had returned, and the patient screamed at every stitch, saying that this hurt her very much, whereas during the operation she had felt almost no pain.

This observation has convinced me that even the removal of the eyeball does not lie outside the field of application of the new local anæsthetic.

CASE II.—*Ptosis operation after subcutaneous injection of cocaine; anæsthetic effect not very satisfactory.*—A boy aged about ten years, with double congenital ptosis, was operated on at the clinic of the University, November 25th. I injected a few drops of a four per cent. solution of cocaine under the skin of the right upper eyelid, introducing the point of the syringe 3 mm. above the edge of the lid, near the outer commissure, and advancing it horizontally nearly to the inner commissure. In withdrawing the needle, I injected the liquid. The lid swelled slightly, was suffused with blood, and in ten minutes only partially insensible. I held it compressed between a clamp, removed an elliptical piece of skin and muscle, and stitched the lower lip of the wound to the upper, passing the sutures high up through the skin. The tissue which I removed was infiltrated with blood. The patient

had pain during the whole operation, not great in the centre, but quite keen at the periphery of the wound. He was restless and uneasy. I etherized him, which took about one minute, and performed the same operation on the other eye under perfect anæsthesia. The four black silk-sutures which loosely closed each wound were removed to-day, a week later, before the class. There was no trace of suppuration; primary union had taken place in both lids, though the wounds had been protected by nothing more than a clean handkerchief, and the boy had gone home to Harlem immediately after the operation. The result in both eyes is perfect.

CASE III.—*Perforation of drumhead; cocaine anæsthetizes the inner wall of the drum-cavity, but not the drumhead.*—Mr. —, aged twenty-one, a student of medicine, presented himself on October 23d at my office, with a middle-sized, clean-cut perforation in each drumhead. The drumheads, as well as the inner walls of the drum-cavity were quite sensitive to the touch of a probe. Fifteen minutes after the instillation of cocaine, the drumheads had lost nothing of their sensibility, but the inner walls of the drum-cavity were completely anæsthetic. The patient felt a bitter taste in his throat.

CASE IV.—*Cocaine in cataract operations pre-eminently useful.*—Division of primary and secondary cataract is entirely without pain—a great advantage, for it removes also the reflex contraction of the globe, which favors too great a capsular opening in soft cataract, and prolapse of vitreous or of shreds of capsule in secondary cataract. The perfect rest of the eyeball is highly favorable for an exact technique.

In extraction of senile cataract under cocaine, there is only one step connected with pain, viz., the excision of the iris. This pain is commonly not great, and easily borne. The perfect insensibility of the conjunctiva and cornea insures the steadiness of the eyeball, and the correct location of puncture, counter-puncture, and track of the section. The absence of pressure makes accidents, such as falling of iris before the knife, and prolapse of vitreous, less likely to occur. Without going into details, I may say that it assists the operator in every step, but particularly in the so-called toilet of the wound, i.e., its cleansing and final adjustment.

The property of cocaine to contract the blood-vessels, which is of great advantage in operating, has been suspected of having bad after-effects. Dr. G. J. Ball, in the *New York Medical Journal*, November 22, 1884, page 587, makes the following remark: "It became a question whether the new anæsthetic might not impair nutrition in certain operations in which the slightest impairment might affect the result injuriously. In two cases of cataract extraction in which cocaine was employed, the operations had been followed by sloughing of the flap. It might be well to consider whether this was more than a mere coincidence." I think it was not. Since the introduction of cocaine, fifteen successive extractions have been performed under the influence of cocaine at the New York Ophthalmic and Aural Institute. Only one operation was followed by some reaction—it was a complicated operation. The recovery was protracted, but good. The other cases were free from any disturbance both during the operation and the course of healing, and the results were good in all.

I feel sure that in this, the most important operation in ophthalmic surgery, the rate of success will be increased by the introduction of the new anæsthetic, through Dr. C. Koller.

DECEMBER 2, 1884.

THE SHORTEST CLINICAL REPORT ON RECORD.—A correspondent from Warren, O., would like to hear from the profession on the following case: "Man—after swallowing glass of whiskey, chewed and swallowed part of the glass." Correspondent would like to know how it should have been treated.